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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,453	06/23/2003	Yoshihiro Yazawa	1116-03	9728

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IP GROUP OF DLA PIPER US LLP
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EXAMINER

LAVILLA, MICHAEL E

ART UNIT	PAPER NUMBER
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1775

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/601,453	Applicant(s) YAZAWA ET AL.	
	Examiner LAVILLA	Art Unit 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,17,18,21 and 29-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,17,18,21 and 29-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

WITHDRAWAL OF FINAL REJECTION

1. The Final Rejection of 24 March 2006 is withdrawn. Applicant's amendment filed on 28 August 2006 has been entered. The amendment filed on 12 September 2006 is believed to be a duplicate of the 28 August 2006 amendment without effect.

Claim Objections

2. The claims are objected to because of the following informalities: The presented claims are replete with inappropriate dash marks. See, for example, the first word in line 2 of Claim 17. Such inappropriate dash marks appear throughout the claim set, and they should all be removed. Appropriate correction is required.
3. Claims 2 and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Regarding Claims 2 and 18, the claims from which these claims depend specify that the metal powder is zinc. Since these claims appear to permit metal powder of other than zinc, they are improperly broadening of their respective previous claims.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
5. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 2, 5, 17, 18, 21, and 29-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Regarding each of these claims, it is unclear what is meant by the phrase "said metal powder content in a dry paint film is about 20% to about 60% by volume," or any analogous phrase. It is unclear how this volumetric percentage is measured. For example, with respect to Claim 1, the amount of zinc cannot exceed 70% by weight and the volumetric percentage of zinc is to be between 20 and 60 percent. The density of zinc is about 7 g/cm³, whereas the remainder of the paint would be expected to have a density of about 1 g/cm³. It is unclear how most of the claimed volumetric percentages of 20 to 60 percent could be obtained. Were the film 70 % by weight zinc, the film would roughly contain 25 % by volume zinc. With less zinc, only lesser volumetric percentages could be achieved. This contrasts with applicant's characterization that prior art films having 70 weight percent zinc correlate with 60 volume percent zinc. See paragraph 55 in the Specification. Is this volumetric percentage related to powder apparent density? Are the densities of the individual powder particles far from zinc bulk density? Are these volumetric percentages ranges tailored for powders other than zinc? For those claims that do not place an upper limit on the amount of zinc that may be present, it remains unclear how this volumetric percentage is to be ascertained.

8. Claims 1, 2, 5, 17, 18, 21, and 29-48 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a narrow range of the claimed volumetric percentages, does not reasonably provide enablement for most of the range. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. For example, with respect to Claim 1, the amount of zinc cannot exceed 70% by weight and the volumetric percentage of zinc is to be between 20 and 60 percent. The density of zinc is about 7 g/cm³, whereas the remainder of the paint would be expected to have a density of about 1 g/cm³. It is unclear how most of the claimed volumetric percentages in the range of 20 to 60 percent can be obtained. Were the film 70 % by weight zinc, the film would roughly contain 25 % by volume zinc. With less zinc, only lesser volumetric percentages could be achieved. This contrasts with applicant's characterization that prior art films having 70 weight percent zinc correlate with 60 volume percent zinc. Since it is unclear how to reconcile this apparent discrepancy and since it is unclear how the full range of claimed articles can be made, rejection is appropriate. For those claims that do not place an upper limit on the amount of zinc that may be present or that permit powder other than zinc, the claims are similarly not enabled because it cannot be understood how applicant has taught how to make and characterize an article that will satisfy the full range of claimed volume percent of zinc powder in view of applicant's characterization that 70 weight percent zinc powder correlates with 60 volume

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percent zinc powder when it seems that it should correlate with closer to 25 volume percent.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

11. Determining the scope and contents of the prior art.
12. Ascertaining the differences between the prior art and the claims at issue.
13. Resolving the level of ordinary skill in the pertinent art.
14. Considering objective evidence present in the application indicating obviousness or nonobviousness.

15. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Sakamoto et al. WO 02/099154. Sakamoto teaches seam welding a stainless steel sheet having an epoxy paint layer with zinc and zinc/aluminum alloy powder as claimed. See Sakamoto USPA 2003/0196715 (Abstract; paragraphs 39, 40, 68-72, and 80-86; and Table 3) (translation of WO 02/099154). Many of the disclosed alloy powders contain significant amounts of aluminum. Using those powders or zinc powders having relatively moderate densities with the suggested amounts of powder, namely, in excess 75 weight percent, it would be expected

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that the claimed volume percentages would be achieved. Sakamoto may not exemplify the claimed functional agents. It would have been obvious to one of ordinary skill in the art at the time of the invention to include any traditional processing agents in the paint of Sakamoto, including those claimed, in order to confer optimal processing on the article of Sakamoto. It is noted that no particular amounts or chemical compositions of these agents are claimed.

Response to Amendment

16. In view of applicant's amendments and arguments, the claim objection, the section 112, second paragraph rejection, the section 112, first paragraph rejection, and the section 103 rejection over Sakamoto of the Office Action mailed on 24 March 2006 are withdrawn.


Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is (571) 272-1539. The examiner can normally be reached on Monday through Friday.
18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael La Villa
10 December 2006


MICHAEL E. LAVILLA PH.D.
PRIMARY EXAMINER